

marked up versions are not being supplied for any added claim or canceled claim.

CLAIMS

Sub D1
1. (Amended) A method of forming a conductive line comprising the following steps:

forming a polysilicon layer;

forming a silicide layer against the polysilicon layer;

providing a conductivity-enhancing impurity within the silicide layer; and

after the providing of the conductivity-enhancing impurity, etching the polysilicon layer and the silicide layer into a conductive line shape.

2. The method of claim 1 wherein the silicide comprises a metal selected from the group consisting of tungsten, titanium, molybdenum and cobalt.

3. The method of claim 1 wherein the steps of forming the silicide layer and providing the conductivity-enhancing dopant therein together comprise:

depositing a metal together with the conductivity-enhancing impurity on the polysilicon layer; and

reacting the metal with the polysilicon to form the silicide layer having the conductivity-enhancing impurity therein.

4. The method of claim 1 wherein,
the step of forming the silicide layer comprises chemical vapor depositing silicide on the polysilicon layer; and
the step of providing the conductivity enhancing impurity comprises chemical vapor depositing the conductivity-enhancing impurity *in situ* with the chemical vapor depositing of the silicide.

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5. The method of claim 1 wherein,
the step of forming the silicide layer comprises chemical vapor depositing a tungsten-comprising silicide on the polysilicon;
the step of providing the conductivity-enhancing impurity comprises chemical vapor depositing the conductivity-enhancing impurity *in situ* with the chemical vapor depositing of the tungsten-comprising silicide; and
the conductivity-enhancing impurity comprises a group III or a group V element.

6. The method of claim 5 wherein the step of chemical vapor depositing the conductivity-enhancing impurity comprises utilizing a precursor compound selected from the group consisting of PH_3 , AsH_3 , and diborane.

7. The method of claim 1 wherein the conductivity-enhancing impurity is provided to a concentration of at least about 1×10^{18} ions/cm³ within the silicide layer.

8. The method of claim 1 wherein the step of forming the silicide layer and the step of doping the silicide layer together comprise:

providing a target comprising a metal, silicon and the conductivity-enhancing impurity; and

sputtering of the target to form the silicide layer and the conductivity-enhancing impurity within the silicide layer, the silicide layer comprising the metal.

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9. The method of claim 1 wherein the step of providing the conductivity-enhancing impurity comprises:

ion implanting the conductivity-enhancing impurity into the silicide layer after forming the silicide layer.

10. The method of claim 1 wherein the polysilicon layer is doped with the conductivity-enhancing impurity, and wherein the step of providing the conductivity-enhancing impurity comprises:

out-diffusing the conductivity-enhancing impurity from the doped polysilicon layer into the silicide layer.

11. The method of claim 1 wherein the step of providing the conductivity-enhancing impurity comprises:

gas phase chemical doping of the silicide layer.

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12. The method of claim 1 wherein the conductive line is a wordline.

Please cancel claims 13-14.

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15. (Amended) A method of forming a conductive line comprising the following steps:

- forming a polysilicon layer;
- forming a silicide layer against the layer of polysilicon;
- during the forming of the silicide layer, providing a conductivity-enhancing impurity within the silicide layer; and
- after providing the conductivity-enhancing impurity within the silicide layer, subjecting the silicide layer to a processing step of over 850°C for at least 10 seconds.

16. The method of claim 15 wherein the forming the silicide layer comprises depositing a metal layer over the polysilicon and reacting the metal layer with the polysilicon, and wherein the conductivity-enhancing impurity is provided within the metal layer prior to the reacting the metal layer with the polysilicon.

17. (Amended) The method of claim 15 wherein the forming the silicide layer comprises depositing a metal layer over the polysilicon and reacting the metal layer with the polysilicon, and wherein the conductivity-enhancing impurity is provided during a CVD process.

18. (Amended) The method of claim 15 wherein the conductivity-enhancing impurity is provided during one of a CVD process and a sputter deposition.

19. The method of claim 15 wherein the conductivity-enhancing impurity is provided to a concentration within the silicide layer of at least about 1×10^{18} ions/cm³.

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20. (Amended) A method of forming a conductive line comprising the following steps:

forming a polysilicon layer;

forming a silicide layer against the layer of polysilicon;

providing a conductivity-enhancing impurity within the silicide layer; and

subjecting the silicide layer to a rapid thermal processing step to exceed 850°C for at least 10 seconds while exposing the silicide layer to an oxygen-comprising atmosphere.

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29. (Amended) A method of forming a conductive line comprising:

forming a polysilicon layer;

sputter depositing a silicide layer over the polysilicon layer; and

providing a conductivity-enhancing impurity within the silicide layer.

30. The method of claim 29 further comprising exposing the silicide layer to an oxygen-comprising atmosphere.

31. The method of claim 29 wherein the conductivity-enhancing impurity comprises phosphorous.

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32. The method of claim 29 further comprising providing a dopant within the polysilicon layer to a concentration of at least about 1×10^{19} ions/cm³.

Please cancel claims 33-36.

Please add the following new claims:

Sub D

37. (New) The method of claim 1 wherein after the providing of the conductivity-enhancing impurity, forming source/drain regions.

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38. (New) The method of claim 15 wherein after the providing of the conductivity-enhancing impurity, forming source/drain regions.

39. (New) The method of claim 20 wherein after the providing of the conductivity-enhancing impurity, forming source/drain regions.

40. (New) The method of claim 29 wherein after the providing of the conductivity-enhancing impurity, forming source/drain regions.